

PATENT SPECIFICATION

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- (21) Application No. 10652/71 (22) Filed 13 April 1971
 (23) Complete Specification filed 28 March 1972
 (44) Complete Specification published 11 Sept. 1974
 (51) International Classification A47G 27/02 B32B 31/18 25/10
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(19)



(54) PATTERNED TILES

ERRATA

SPECIFICATION NO 1366341

Page 1, line 14, *after surface insert an*

Page 1, line 16, *after thickness insert .*

Page 1, Line 52, *for move read remove*

Page 2, line 2, *for function read functions*

Page 2, line 19, *for it read It*

THE PATENT OFFICE
 3 March 1975

R 21391/2

20 along the cut lines.

The lines of the cut or cuts define one or more enclosed areas on the tile surfaces. Alternatively, the enclosed area can be at an edge of the tile, in which case it will be the area defined by that edge and the cut line or lines. The lines of the cuts may be continuous or discontinuous. The enclosed areas can be, for example, circular, rectangular, elliptical or any other desired regular or irregular shape.

The enclosed areas can when desired be removed from the tile by cutting through the remainder of the thickness of the tile along the lines of the cuts. Each cut-out portion can then be transposed into another tile from which a similar area has been removed and vice versa. It will be appreciated that, where the two tiles are of different colours or textures, a patterned effect is obtained by this means. The invention thereby provides a convenient means of enabling a householder, for example, to purchase a number of differently coloured tiles and to transpose the enclosed areas between various tiles in order to achieve his desired patterned effects.

The invention also includes a kit of parts
 [Price 25p]

A carpet tile has a backing layer usually of rubber or thermoplastic resin, to which is attached a fibrous surface layer, for example of needle-punched fibres. The tiles may have a cellular, i.e. foamed or aerated backing layer. Additionally the tile may be provided with a fabric or scrim reinforcement between the backing layer and the fibrous surface layer. This reinforcement can improve the dimensional stability of the tile.

The enclosed area may be cut on either of the main faces of the tile, although it is preferred to cut into the backing rather than the carpet topping layer. Nevertheless, the depth of cut may, if desired, extend through the entire backing layer and partway into the carpet layer, or it may extend partway into the backing layer only, or it may extend through the entire backing layer but not into the carpet layer. Where a reinforcement layer is provided the enclosed area may be cut through both the backing layer and the reinforcement layer, although this is not essential.

The depth to which the enclosed area is

SEE ERRATA SLIP ATTACHED

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(54) PATTERNED TILES

(71) We, DUNLOP LIMITED, a British Company of Dunlop House, Ryder Street, St. James's London S.W.1, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to carpet tiles and particularly carpet tiles which can be provided with patterns.

Accordingly, in one aspect, the invention provides a carpet tile having on its outer surface area enclosed by one or more cut lines, the cuts extending into a proportion of the thickness but not completely through the thickness, of the tile, whereby that area can be subsequently cut out from the tile by cutting through the remainder of its thickness along the cut lines.

The lines of the cut or cuts define one or more enclosed areas on the tile surfaces. Alternatively, the enclosed area can be at an edge of the tile, in which case it will be the area defined by that edge and the cut line or lines. The lines of the cuts may be continuous or discontinuous. The enclosed areas can be, for example, circular, rectangular, elliptical or any other desired regular or irregular shape.

The enclosed areas can when desired be removed from the tile by cutting through the remainder of the thickness of the tile along the lines of the cuts. Each cut-out portion can then be transposed into another tile from which a similar area has been removed and vice versa. It will be appreciated that, where the two tiles are of different colours or textures, a patterned effect is obtained by this means. The invention thereby provides a convenient means of enabling a householder, for example, to purchase a number of differently coloured tiles and to transpose the enclosed areas between various tiles in order to achieve his desired patterned effects.

The invention also includes a kit of parts
 [Price 25p]

comprising two or more tiles of the above type, which contains tiles of different colours or surface textures.

The depth of the cuts can be sufficient to render the remaining necessary cutting to move the defined areas from the body of the tile quite easy, but nevertheless, the tiles with the enclosed patterns cut into them can be sufficiently strong to be serviceable as they are. Thus the tiles may be used without any transposing of enclosed areas, should this be desired. Furthermore, if a tile is provided with a number of enclosed areas defined by cuts, then it is not necessary completely to cut out all or any of these areas but as few or as many as may be desired. The type and number of areas cut out and transposed from any tile can be varied to suit the individual patterning requirements of the user.

A carpet tile has a backing layer usually of rubber or thermoplastic resin, to which is attached a fibrous surface layer, for example of needle-punched fibres. The tiles may have a cellular, i.e. foamed or aerated backing layer. Additionally the tile may be provided with a fabric or scrim reinforcement between the backing layer and the fibrous surface layer. This reinforcement can improve the dimensional stability of the tile.

The enclosed area may be cut on either of the main faces of the tile, although it is preferred to cut into the backing rather than the carpet topping layer. Nevertheless, the depth of cut may, if desired, extend through the entire backing layer and partway into the carpet layer, or it may extend into the backing layer only, or it may extend through the entire backing layer but not into the carpet layer. Where a reinforcement layer is provided the enclosed area may be cut through both the backing layer and the reinforcement layer, although this is not essential.

The depth to which the enclosed area is

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cut can be varied widely. The cut area performs two basic function. Firstly, it defines the area or areas which can be cut out and transposed. Secondly it renders the final cutting out easier than it would be if the enclosed area were merely marked on the surface of the tile. The deeper the cut the easier the final cutting out operation, but of course the thickness of the uncut portion should enable the tile to retain sufficient strength to be handled and transported. The maximum amount of cut-through that can be utilised without danger of premature break-up of the tile will of course vary from material to material and with the actual thickness of the tile. As indicated above, it is possible to cut through all the backing layer but little or none of the carpet layer. Thus, for carpet tiles, it may, however, be preferable to cut through from 75% to 100% of the backing layer leaving the carpet layer uncut.

The invention is also applicable to self-adhesive carpet tiles. Tiles of this type normally have a pressure-sensitive adhesive applied to their back face. This adhesive layer is protected prior to use by a sheet of release paper placed over the back face of the tile. In order to provide the desired enclosed areas on tiles of this type, it is preferred to cut through the release paper, the adhesive layer and the required proportion of the tile thickness in one operation. Alternatively, the enclosed area may be cut into the front face of this type of tile so that the release paper is uncut.

Example

12 inch square carpet tiles were made having a 2mm thick filled rubber backing. The backing was formed having a lightly waffled impression on its undersurface. The backing was laminated to a needle-punched nylon carpet layer of between 1.5 and 2mm. thickness. A number of carpet tiles of different colours were provided.

Enclosed areas were cut into the backing of each tile to a depth of 95% of the thickness of the backing to provide tiles of the invention. The cutting was performed using a flexible steel strip cutter which was shaped to the desired pattern and embedded in a block.

It was then a simple operation to cut out with a knife similar areas of differently coloured tiles and to transpose each cut-out area into a cut-out tile of a different colour, thereby providing patterned tiles.

WHAT WE CLAIM IS:—

1. A carpet tile consisting of a backing layer to which is attached a fibrous surface layer, said tile having on its surface an enclosed area defined by one or more cut lines, the cuts extending into a proportion of, but

not completely through, the thickness of the tile, whereby that area can be subsequently cut out from the tile by cutting through the remainder of its thickness along the cut lines.

2. A carpet tile according to Claim 1, in which the enclosed area includes part of an edge of the tile.

3. A carpet tile according to Claim 1 or 2, in which the backing layer is of rubber or thermoplastic resin.

4. A carpet tile according to any one of the preceding claims in which the fibrous surface layer is of needle-punched fibres.

5. A carpet tile according to any one of the preceding claims in which a scrim or fabric reinforcement layer is provided between the backing layer and the fibrous surface layer.

6. A carpet tile according to any one of the preceding claims, in which the enclosed area is cut into the back face of the tile.

7. A carpet tile according to any one of the preceding claims in which the enclosed area is cut into the backing layer but not into the fibrous surface layer.

8. A carpet tile according to any one of the preceding claims in which the backing layer is cut through to an amount of from 75% to 100% of its thickness.

9. A carpet tile according to any one of claims 1 to 5 in which the enclosed area is cut into the front face of the tile.

10. A carpet tile according to any one of the preceding claims in which the backing layer has a cellular structure.

11. A carpet tile according to any one of the preceding claims, which has a pressure-sensitive adhesive applied to its back face.

12. A carpet tile according to Claim 11, which has a layer of a release paper positioned over the adhesive layer.

13. A carpet tile according to Claim 11, in which the enclosed area is cut through the adhesive layer in addition to the required proportion of the tile thickness.

14. A carpet tile according to Claim 12, in which the enclosed area is cut through the adhesive layer and release paper in addition to the required proportion of the tile thickness.

15. A carpet tile according to Claim 1, substantially as hereinbefore described.

16. A carpet tile having an enclosed area cut into its thickness substantially as hereinbefore described with reference to the Example.

17. A kit of parts comprising two or more tiles according to any one of the preceding claims, which contains tiles of different colours or surface textures.

R. I. G. McKAY,
Agent for the Applicants.

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